

IN THE CLAIMS:

1. (Currently Amended) ~~Transceiver for use in an electronic device wherein said transceiver adapts itself~~A dual mode transceiver, comprising:
at least one mixer; and
a controller configured to adapt the transceiver to operate in two modes operating either as a radio frequency tag reader or as a Bluetooth transceiver by changing its reception and transmission capabilities ~~with control logic of the transceiver, wherein the controller is further configured to control the~~ at least one mixer of said transceiver to operate said at least one mixer in both of the two modes, wherein a single antenna the at least one mixer is useable for said transceiver operating as said radio frequency tag reader or as said bluetoothBluetooth transceiver.
2. (Currently Amended) The dual mode transceiver of claim 1, wherein said Bluetooth transceiver is useable as a transceiver for a 2.4 gigahertz industrial, scientific and medical band radio frequency tag reader system.
3. (Currently Amended) The dual mode transceiver of claim 1, wherein said transceiver comprises an integrated circuit.
4. (Currently Amended) The dual mode transceiver of claim 1 for said use in said electronic device comprising a mobile terminal device.
5. (Currently Amended) Radio device having a radio receiver and a radio transmitter wherein operability of said device is by using a single antenna in two modes, wherein said device is configured to operate in a bluetooth mode and a radio frequency tag reader mode by ~~with control logic to control~~ of at least one mixer of said receiver and of said transmitter to operate said at least one mixer in both of the two modes, said radio receiver and said radio transmitter comprising a single transceiver that adapts itself to operate is operable as a bluetooth transceiver

using said single antenna in said bluetooth mode and as a radio frequency tag reader using said single antenna in said radio frequency tag reader mode by ~~changing~~control of its reception and transmission capabilities.

6. (Previously Presented) The radio device of claim 5, wherein said operability of said radio device in either mode is by using said radio receiver and said radio transmitter.

7. (Previously Presented) The radio device of claim 5, wherein said radio device is incorporated in a device having additional device functionality.

8. (Previously Presented) The radio device of claim 7, wherein said device in which said radio device is incorporated comprises a mobile telephone.

9. (Currently Amended) The radio device of claim 5, ~~further characterized by~~wherein said radio device ~~installed~~is for installation in a mobile telephone.

10. (Currently Amended) ~~Radio device having~~Apparatus comprising a radio receiver, a radio transmitter, and a signal processor, wherein the radio receiver is responsive to an incoming analog radio signal for providing a down converted and modulated signal to said signal processor, wherein the radio transmitter is responsive to an output signal from said signal processor for transmission as an outgoing analog radio signal, said ~~device~~apparatus further comprising ~~control logic~~a controller for controlling said ~~radio device~~apparatus in two modes, a first mode for operating as a Bluetooth device and a second mode for operating as a radio frequency tag reader wherein said radio receiver and said radio transmitter comprise a single transceiver that ~~adapts itself~~is configured to operate with a single antenna as said radio frequency tag reader or as a Bluetooth transceiver by ~~with control logic to control~~controlling at least one mixer of both said receiver and said transmitter to operate ~~said at least one mixer~~ in both the first mode and the second mode.

11. (Currently Amended) ~~Control logic~~A control for controlling a radio device in two modes, a first mode for operating as a Bluetooth ~~device~~transceiver and a second mode for operating as a radio frequency tag reader wherein said radio device comprises a single transceiver ~~that adapts itself~~controlled by said control to operate ~~with a single antenna~~ as said radio frequency tag reader or as ~~a~~said Bluetooth transceiver by changing its reception and transmission capabilities by controlling at least one mixer to operate both in the first mode operating as a mixer for the radio device operating as said Bluetooth transceiver and in the second mode operating as a mixer for the radio device operating as said radio frequency tag reader.

12. (Previously Presented) Mobile telephone, comprising the transceiver of claim 1 in combination with means for communicating with a radio access network over a radio interface.

13. (Previously Presented) The mobile telephone of claim 12, wherein said means for communicating includes a signal processor and a mobile telephone transceiver.

14. (Previously Presented) Method, comprising,
switching a mode of a single transceiver able to operate as a radio frequency tag reader in one mode and as a Bluetooth transceiver in another mode by adapting at least one mixer of said single transceiver to operate in both modes, and
using a single antenna for said single transceiver operating as said radio frequency tag reader or as said Bluetooth transceiver.

15. (Previously Presented) The method of claim 14, wherein said single transceiver is both for interrogating a radio frequency tag and for participating in a Bluetooth piconet.

16. (Previously Presented) The method of claim 15, wherein said single transceiver and said single antenna are for use in a mobile telephone and wherein said method further comprises operating a mobile telephone transceiver of said mobile telephone over a radio interface to a radio access network.
17. (New) The dual mode transceiver of claim 1, wherein a single antenna is useable for said transceiver operating as said radio frequency tag reader or as said Bluetooth transceiver.
18. (New) The control of claim 11, wherein said single transceiver is configured to operate with a single antenna when operating as said radio frequency tag reader or as said Bluetooth transceiver.
19. (New) The dual mode transceiver of claim 1, wherein said controller is configured to control the at least one mixer to operate with a different gain and bias current according to mode of operation as a radio frequency tag reader or as a Bluetooth transceiver.
20. (New) The apparatus of claim 10, wherein said controller is configured to control the at least one mixer to operate with a different gain and bias current in said first mode than in said second mode.
21. (New) The control of claim 11, wherein said control is configured to control the at least one mixer to operate with a different gain and bias current in said first mode than in said second mode.
22. (New) The method of claim 14, wherein said adapting said at least one mixer of said single transceiver to operate in both modes comprises adapting a first selected gain and bias current in said one mode and a second selected gain and bias current in said other mode.